

BEELY (F.)

On the Scope of Orthopædics.

✓  
BY

F. BEELY, M. D.,

BERLIN.

REPRINTED FROM THE  
New York Medical Journal  
*for May 14, 1892.*





*Reprinted from the New York Medical Journal  
for May 14, 1892.*

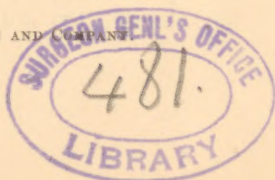
---

## ON THE SCOPE OF ORTHOPÆDICS.

BY F. BEELY, M.D.,  
BERLIN.

IN the introduction or preface of treatises upon orthopædic surgery, authors usually give a concise definition of this specialty and a short enumeration of the diseases which come under the head of this department. In some essays that have appeared within the past few years the necessity for so doing has been emphasized. Dr. N. M. Shaffer, for example, delivered an address before the International Medical Congress at Berlin in 1890 entitled, *What is Orthopædic Surgery?* Dr. Gibney also read a paper before the American Orthopædic Association, at its fifth annual meeting at Washington, in 1891, called *Orthopædic Surgery; its Definition and Scope*,\* and Dr. Shaffer's reply was published in the *New York Medical Journal* for November 14, 1891. There seems to be no definite agreement as to the true definition of this specialty. Authors in different countries vary very materially in their views upon this subject. Shaffer, for example, says: "Orthopædic surgery is that department of surgery which includes the prevention, the mechanical treatment and the operative treatment of chronic or pro-

\* *N. Y. Med. Jour.*, Nov. 7, 1891.



gressive deformities, for the proper treatment of which special forms of apparatus or special mechanical dressings are necessary." Dr. Gibney, whose paper is essentially a critique upon Dr. Shaffer's address, agrees with him in the main, but he does not think that the scope of orthopædics should be limited from the standpoint of mechanico-therapy. Acknowledging Shaffer's definition to be to a great extent the true one, Gibney omits, however, the qualifying phrase of the definition, which says: "For the proper treatment of which special forms of apparatus, etc., are necessary." Dr. L. A. de Saint-Germain, in his *Chirurgie orthopédique*, defines the problem thus: "Le redressement, la rectification, des difformités." But we find in his book sections on obesity, malformations of the ears and of the teeth, hypertrophy of the tongue, hare-lip, nævi, strabismus, etc. Dr. E. H. Bradford and Dr. R. W. Lovett, in their treatise on *Orthopædic Surgery*, 1890, without giving the definition, say: "Orthopædic surgery should include the prevention as well as the cure of deformity." Besides Pott's disease, club-foot, lateral curvature, bow-legs, the diseases of the joints, etc., they include spondylolisthesis, congenital dislocation of the hip, webbed fingers and toes, and cerebral paralysis, but omit to cite the deformities resulting from fractures, dislocations, and burns. Dr. Schreiber, in his *General and Special Orthopædic Surgery* (*Allgemeine und speciele orthopädische Chirurgie*, 1888), calls orthopædics "the science of the deformities of the human body." Dr. Hoffa, in his treatise, limits its sphere to those deformities of the body which appear as deviations of posture and stature of the skeleton. The purport of these two books is very similar. Hoffa includes prothesis under orthopædics, which means the manufacturing of all apparatus and bandages. Both authors devote special chapters to the treatment of orthopædic diseases following fracture or dislocation of bones, traumatic lesions



and burns of the soft parts, and inflammation of the soft parts. There are numerous other examples, but the foregoing quotations may be sufficient. It is impossible in so short an article to indicate the various definitions given by different authors. The question therefore arises, Is it necessary or even advisable to confine or limit the realm of orthopædic surgery? Possibly it would be best to leave it all to gradual development. Should we not rather hold fast to the present opinion, and, without regard to principles, study from the various sources those diseases the treatment of which is generally accepted by orthopædist?

It may be of some interest to glance into the history of orthopædic surgery—viz., as to how it originally developed—thus trying to gain further insight into its nature, and become familiar with methods which may lead us to accord to it proper rank among the specialties. General medicine has been divided into specialties, because it has been impossible for one man to acquire a proficiency in all. This separation has been due to different circumstances. It was necessary that either one particular organ or a restricted region of the body should be studied—for example, the nose, throat, or larynx; or a specified system of tissue which the specialist should select as his province—as that of the skin, the nerves, etc.; or therapeutical measures the application of which required special dexterity; or else appliances, like massage, gymnastics, and electro-therapeutics. The department of the last named is, of course, not limited. One is at first uncertain as to which category of specialties orthopædy belongs. From the many definitions attempted, it appears that great effort has been made to secure for it a firmly planted position in the department of surgery. The fact that scientific authors and practitioners desire to do so seems evident. On an anatomic-physiological basis, a scientific system may be

more clearly erected. Pathological anatomy, symptomatology, diagnosis, and therapeutics are more clearly allied to it, while it is difficult to find a systematic scientific classification from the therapeutical point of view. The practitioner, to whom the scientific point of view is not of much importance, desires to appear to the public not so much as practicing therapeutical methods as that of being an authority upon the treatment of a special class of diseases, so that he need have no fear of being supplanted in order that his patient may have change of treatment. We can not admit that this view of the subject is the right one, as it is not consistent or in accordance with historical development, at least so far as Germany is concerned, and I think that German conditions are especially suitable as illustrating this point, as Germany has had for so long a time the advantage of a thoroughly instructed medical profession of the highest scientific order. If we glance at the history of orthopædic surgery in Germany, as sketched by Hoffa, our attention is especially drawn to the names of Heine (1770–1838) and to Hessing. Hoffa says of the former: The name of Heine takes the first rank among the founders of orthopædia.

Johann Georg Heine, of Würtemberg: "His establishment was the prototype of all others"; and, regarding the latter (Hessing), we are indebted to him, a skillful mechanic, for the knowledge of all kinds of splint-capsule apparatus, and various apparatus for supporting the spine. Heine was in early life an apprentice to a cutler and afterward to a manufacturer of surgical instruments. Neither of these men belonged to the medical profession, nevertheless they greatly advanced orthopædic surgery, and have become famous beyond the confines of Germany. Their reputation was due to their skillfulness in the use of mechanical instruments. Heine devoted himself exclusively to the ap-

plication of orthopædic apparatus, and scorned to make use of gymnastic exercises or subcutaneous tenotomy, invented at that time by Stromeyer. He equally despised the aid of medicine administered internally (see *Bibliographisches Lexicon*, by Goult). Both of these men have proved that eminence and success, not surpassed even by the most celebrated contemporary surgeons, may be acquired by the adoption solely of mechanical methods. It is not to be wondered at that Heine, as he had been deprived of the advantage of medical instruction, and also on account of his eccentric therapeutical theories, should have made many mistakes, especially as he often ventured upon the treatment of diseases when the proper mechanical instruments could not be procured. On account of his general success he became extremely arrogant, and he practiced general medicine irrespective of all professional ethics. These shortcomings, however, did not detract from his real merit, save that he did not during his lifetime receive full credit for his valuable services. Hoffa continues: "He steadfastly adhered to his conviction that in orthopædy mechanical methods should alone be adopted. Many of his disciples and imitators have practiced his teachings, and thus great reproach rests upon Heine for having delivered orthopædy into the hands of the manufacturers of instruments. The medical profession, consequently, became averse to treating deformities, and so gradually, up to the present time, the majority of them prefer to relegate their patients to the department of the bandagist."

Upon this point I differ with Hoffa. Heine, I think, was on the right track. Members of the profession who do not appreciate the value of mechanical apparatus are to be blamed for this decadence, for they leave to the bandagist the most important department of therapeutics. Mechanical treatment is, and ever will be, the very essence of ortho-



pædy. Upon that it stands or falls. If mechanical treatment be left out, orthopædy becomes either operative surgery or gymnastics and massage. The orthopædist must, of course, take personal supervision of the mechanical treatment, and not simply prescribe the apparatus as the practitioner prescribes his medicine. The apparatus should be made under his special direction, and he must assume the entire responsibility of its application and use. Under these conditions alone can he hope for continual development and progress. What would be thought of a surgeon who restricted his practice to diagnosis and prescription, and turned his patient over to the nurse for mechanical treatment? What the patient demands of the surgeon he should require of the orthopædician. From the difficulty of defining the line between orthopædy and surgery there arose, according to Hoffa, the term "orthopædic surgery." As I have expressed my opinion to the effect that mechanical treatment is the essence of orthopædy, I should therefore prefer to have it called *mechanico-therapy*. The last term would be the more significant, but in Germany this term is used for "cures by motion" or gymnastics and massage. General surgery, then, would be divided into mechanical surgery and operative surgery. As there are some physicians who prescribe only internal medicine and do not perform surgical operations, so there are others who practice both internal and external treatment with equal skillfulness. Some surgeons undertake operative work only, others mechanical only, while many others practice both combined. An entire separation could be practicable only in large cities.

The consideration from this standpoint leads to the question, What diseases belong to the department of orthopædy and which of them belong to general surgery? Unfortunately, I do not know to what extent Heine carried his experiments. As to Hessing, we know that besides treating



deformities, he also treated joint diseases, some cases of dorsalis, and also fractures successfully. We have seen, therefore, that from the above-mentioned illustrations the criterion of orthopædy is the mechanical treatment; and the representatives of orthopædic surgery, and other physicians who have had equal advantages show a predilection for solving mechanical problems. By this means patients may be supplied with apparatus from the technical and therapeutic point of view. The orthopædician should undoubtedly be placed upon equal footing with other specialists, in order that the sufferings of mankind may be alleviated. He may lay claim to the treatment of fractures, as well as to mechanical treatment of spondylitis; he may undertake the treatment of hernia as well as curvature. This should be taught in the universities, and it would then lead to a higher estimation of, and to more rapid progress in, mechanical surgery. Young doctors would then have the opportunity of studying the mechanical as well as the operative treatment of deformities, and would be glad to avail themselves of it, as they have hitherto been unable to do, notwithstanding that the professors have had the desire for imparting the knowledge. The number of operations in the treatment of deformities would be greatly diminished, as there are, as a matter of fact, very few that could not be avoided, if relatively simple mechanical means could be correctly and promptly administered. Nearly every osteoclasis or osteotomy in genu valgum or rhachitic curvature of the lower part of the thigh; almost every bloody operation in pes equino-varus; in fact, nearly every violent redressment of angular ankylosis of joint disease, has been necessarily performed because of incompetent knowledge of mechanical treatment.





REASONS WHY

Physicians should Subscribe

— FOR —

# The New York Medical Journal,

EDITED BY FRANK P. FOSTER, M.D.,

Published by D. APPLETON & CO., 1, 3, & 5 Bond St.

1. **BECAUSE :** It is the *LEADING JOURNAL* of America, and contains more reading-matter than any other journal of its class.
2. **BECAUSE :** It is the exponent of the most advanced scientific medical thought.
3. **BECAUSE :** Its contributors are among the most learned medical men of this country.
4. **BECAUSE :** Its "Original Articles" are the results of scientific observation and research, and are of infinite practical value to the general practitioner.
5. **BECAUSE :** The "Reports on the Progress of Medicine," which are published from time to time, contain the most recent discoveries in the various departments of medicine, and are written by practitioners especially qualified for the purpose.
6. **BECAUSE :** The column devoted in each number to "Therapeutical Notes" contains a *résumé* of the practical application of the most recent therapeutic novelties.
7. **BECAUSE :** The Society Proceedings, of which each number contains one or more, are reports of the practical experience of prominent physicians who thus give to the profession the results of certain modes of treatment in given cases.
8. **BECAUSE :** The Editorial Columns are controlled only by the desire to promote the welfare, honor, and advancement of the science of medicine, as viewed from a standpoint looking to the best interests of the profession.
9. **BECAUSE :** Nothing is admitted to its columns that has not some bearing on medicine, or is not possessed of some practical value.
10. **BECAUSE :** It is published solely in the interests of medicine, and for the upholding of the elevated position occupied by the profession of America.

---

Subscription Price, \$5.00 per Annum. Volumes begin in January and July.

